

BreezeACCESS

IP Broadband WLL



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- **Fast Internet access**
- **Telephony (H.323)**
- **54Mbps per site**
- **3Mbps per subscriber**
- **720 phone calls per site**
- **5 to 15Km cell radius**
- **7000 users per site**
- **CIR, MIR, QoS, VLAN**
- **SNMP, RADIUS**
- **2.4GHz/3.4 – 3.6GHz/3.6 - 4.2GHz**
- **Lowest Costs**

BreezeACCESS IP Broadband Wireless Local Loop system is a high-performance, competitively priced alternative to wire access including regular local loop, ISDN, xDSL and cable modems. BreezeACCESS comprises a full line of Base Station equipment and Subscriber Units to meet the diverse needs of public operators and ISPs.

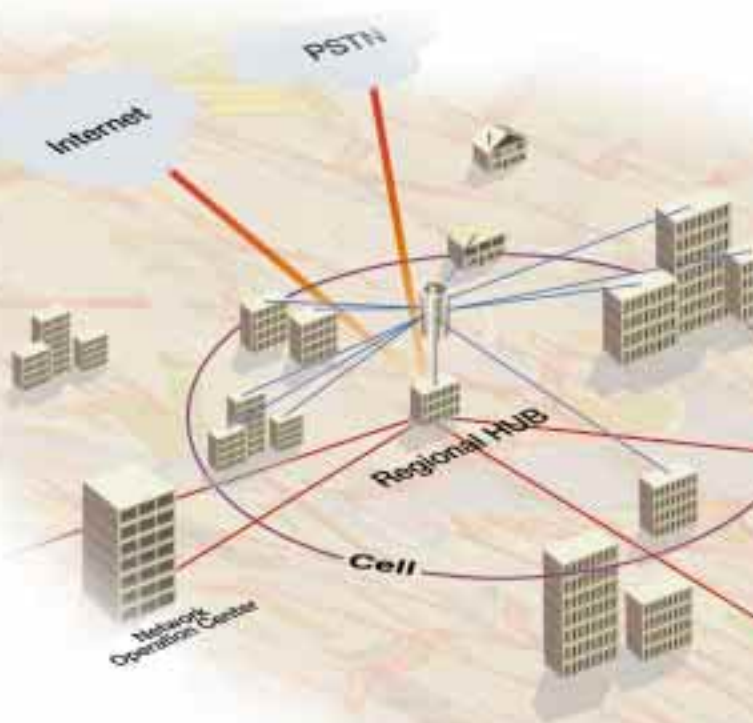
Fast Internet access and telephony (H.323)

BreezeACCESS enables ISPs and service providers to offer their subscribers high-speed wireless IP connectivity services, including fast Internet access and toll quality telephony. BreezeACCESS employs wireless packet data switching technology, significantly more appropriate for IP based services than the older circuit switching technology, and supports Voice over IP transmission based on the H.323 protocol.

Packet Switching	Circuit Switching
Always on-line	Dial-up, connection-based sessions
Resources used only when data is transmitted	Dedicated circuit resources blocked throughout the session
Flexible bandwidth allocation including large bandwidth on demand for burst transmissions	Fixed bandwidth

Data-only or Data and Telephony services

To support different policies of service providers and diverse needs of end-users, BreezeCOM offers a wide range of BreezeACCESS Subscriber Units. The Data-only Subscribers Units family includes wireless adapters that support one workstation, several workstations or a complete LAN (acting as a bridge). The Data and Voice Subscriber Units offer similar capabilities with the added support of regular telephones (POTS).



Up to 54Mbps per Base Station (18 x 3Mbps channels)

High capacity combined with frequency reuse factor of 1 can be achieved, using 6 sector antennas. The 6 antennas connected to 6 Access Units supporting 3Mbps each provide up to 18Mbps aggregate throughput. Up to 3 Access Units may be used in each sector, delivering together an aggregate data rate of up to 54Mbps per base station site.

Up to 3Mbps Internet access

The advanced architecture supports data burst rate of up to 3Mbps per subscriber, much higher than any other currently available WLL solution and most wired solutions including ISDN, allowing fast access to the Internet and enabling end-users to fully exploit the benefits of a wide range of multi-media applications.

Up to 720 simultaneous telephone calls per site, 7000 users per site (@ Erlang 0.1)

Each Access Unit supports up to 40* simultaneous telephone connections, allowing for 240* voice connections in a six-sector cell and a maximum of 720* connections per site in the 3-collocated cells configuration. A high grade of service (0.1 Erlang and better) can be offered to more than 7000* subscribers within the coverage area of a single site.

*Voice Activity Detection (VAD) and IP header compression, to be supported in future release, will permit an increase of more than 100% in capacity.

CIR, MIR, QoS, VLAN Support

BreezeACCESS supports Committed Information Rate (CIR), Maximum Information Rate (MIR), Quality of Service (QoS) and Virtual LAN capabilities. Access providers enjoy the benefit of being able to offer their customers multiple subscription plans with different bandwidth, burst rate and voice quality options to meet various customers needs and to support the operators' differentiation strategy.

SNMP management, RADIUS billing

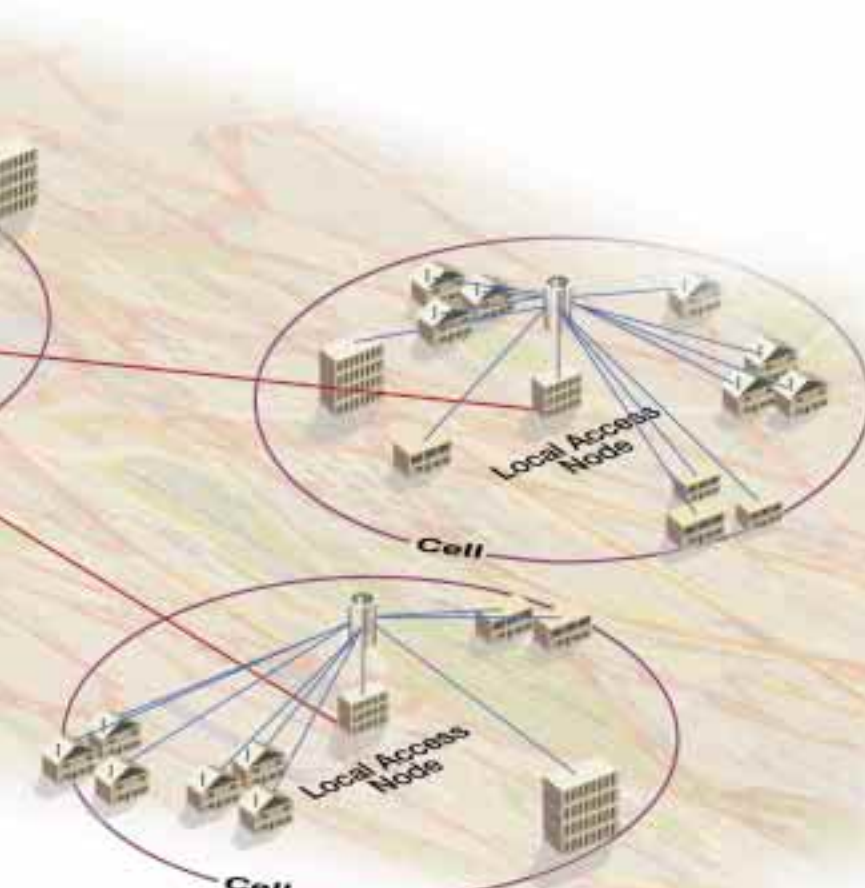
SNMP agents include support of MIB II, Bridge MIB, WLAN MIB and Proprietary MIB. All the data traffic information is transferred to the RADIUS server, using the standard RADIUS information fields and also the Vendor Specific information fields, enabling the service provider to charge according to actual traffic and service type.

2.4GHz/3.4 – 3.6GHz/3.6 – 4.2GHz

BreezeACCESS products operate in the 2.4GHz unlicensed ISM band, in 3.4–3.6GHz and 3.6–4.2GHz licensed frequencies and eventually in the MMDS spectrum.

5 to 15Km cell radius

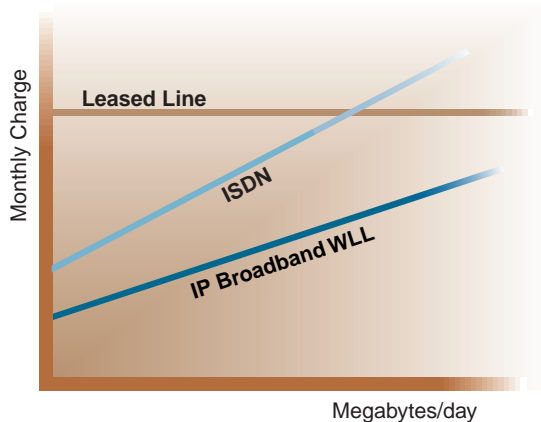
Sophisticated RF technologies enable over 5km cell radius allowing to service a large area with few base stations. The automatic fall-back to data rates of 1 or 2Mbps allows to serve users located up to 15km from the base station without decreasing the maximum 3Mbps data rate available to subscribers located nearer to the base station.



Lowest Infrastructure and Maintenance Cost

Low Initial Costs: The use of the field-proven wireless packet switching technology, combined with the unique system design based on a distributed architecture and intelligent subscriber units, provide for a highly inexpensive infrastructure. The cost of a BreezeACCESS base station is at least one order of magnitude lower than competing solutions, allowing service providers to competitively win against other competitors.

Scalability: The scalable, distributed architecture of the system enables construction of competitively priced systems to support clusters of from as few as several tens of users served by a single Access Unit to over 7000 users with a full blown site using 18 Access Units.



Use of Standard Data Equipment: Rather than using expensive, proprietary telephony exchange switches, any off-the-shelf router can be used for connection to the Internet network and between sites. Standard H.323 LAN to PSTN Gateway is used to relay voice sessions to and from the PSTN and subscribers. The LAN is also used for interconnecting all other necessary equipment, including Gatekeeper, Billing system and other management and administration systems.



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